

Books

Day of Trinity by Lansing Lamont
Atheneum Publishers\$6.95

Hiroshima Plus 20
by The New York Times
Delacorte Press\$5.00

Science: U.S.A. by William Gilman
The Viking Press\$7.50

Reviewed by Daniel J. Kevles,
assistant professor of history

Near Alamogordo, New Mexico, in the dark before morning of July 16, 1945, a lone tower jutted 103 feet into the air from the wasted desert floor. In a sheet metal shack at the top, "the gadget," as the Los Alamos scientists called the nuclear device, rested amidst a tangle of wires. Outside a ten-thousand-yard radius from the tower, hundreds of men waited, tense, nervous, apprehensive.

It had been a long night of waiting. The spatter of rain had pushed the test back to the last possible moment before dawn. But now Samuel Allison, clutching a microphone in the South-10,000 bunker, had begun the countdown. A few feet away, 24-year-old Donald Hornig, fixing his gaze on the instrument panel, nervously fingered the stop switch that would shut down the entire operation at the slightest sign of malfunction. J. Robert Oppenheimer, standing in the doorway, seemed to totter on the verge of nervous collapse. Hundreds of miles to the east at Oak Ridge, a team of psychiatrists, poised, ready, if the test failed, to rush to the aid of the jittery scientists. At minus ten seconds a gong sounded over the public address system. Allison's voice rose to a scream. "Zero!"

"A pinprick of a brilliant light punctured the darkness, spurted upward in a flaming jet, then spilled into a dazzling cloche of fire that bleached the desert to a ghastly white. It was precisely 5:29:45 A.M."

That was Trinity, the first man-made nuclear explosion, as Lansing Lamont describes it in his vividly written, absorbingly detailed book. Many volumes have been written about the events surrounding that weird morning of terror and exhilaration, but none has captured the intense human drama of the Los Alamos effort as expressively or poignantly as *Day of Trinity*. Rather than the technical story of the bomb, this is the personal history, month by month, week by week, day by day, and,

finally, hour by hour, of that small group of people who sweated through the years of the Manhattan Project.

Hundreds of scientists, gone mysteriously from their campuses, came to Los Alamos, the ramshackle settlement some 35 miles north of Albuquerque. They chafed under security restrictions, rasped against jerry-built housing, and endured not only the military but each other. Above all they lived in an air of almost unremitting tension.

Each met the strain in his own way. There was Richard P. Feynman, as likely to play the bongos as he was unlikely to wear socks, who happily figured out the combinations of safes containing classified documents, unlocked them, and left notes that read, "Guess Who?" There was Edward Teller, moody, apt to spend his leisure in long walks, driving his neighbors to distraction by rhapsodizing on the piano at odd hours of the night. There was Robert Oppenheimer, the tough-minded administrator, the man of luminously brilliant eyes, relaxing over the poetry of John Donne.

Whatever the diversions, no one ever forgot the business at hand. Major General Leslie R. Groves, responsible for the expenditure of two billion dollars, warned his aides that if the bomb failed, "each of you can look forward to a lifetime of testifying before Congressional investigating committees."

There was no time for misgivings. Convinced that the United States had to be first with the bomb, consumed by the sheer scientific and technical challenge, the scientists raced ahead. They celebrated wildly the night after the test. But at the moment of Trinity, after the first exhilarating thrill of success, many of them were sharply sobered by what they had wrought. Through Oppenheimer's mind flashed a line from the Bhagavad-Gita: "I am become Death, / The shatterer of worlds." Kenneth T. Bainbridge, with a different kind of eloquence, turned to Oppenheimer and said, "Now we're all sons of bitches."

Sixteen days after Trinity, Turner Catledge, assistant managing editor of *The New York Times*, got word to appear in an old apartment building in downtown Washington the next day. At that Washington meeting he was given the information that would break on *The Times'* pages four days later in the story of Hiroshima. Now, 20 years later, *The Times* has prepared a collection of eight retrospective essays on the impact of the bomb. The pieces in *Hiroshima Plus 20*, all interesting and some first-rate, range from Hanson Baldwin's analysis of the decision to drop the bomb, through A. M. Rosenthal's description of contemporary Hir-

oshima, to W. H. Auden's perception of the bomb and man's consciousness.

Perhaps the most provocative of the essays is Richard H. Rovere's "The Bomb and International Politics." The threat of nuclear war hovering over the world has colored the deliberations of diplomats since August 6, 1945. It has tempered the traditional pursuit of national interests, Rovere argues. The ultimate sanction of diplomacy, as international politics has implied over the last 20 years, is no longer total war. Mr. Rovere inclines to the view that "the bomb and its diplomatic consequences have had, by and large, a stabilizing effect on our time." We have been living, he suggests, in a *pax atomica*.

Apart from a new age of diplomacy, the bomb ushered in a munificent age for science in the United States. Today the federal government spends yearly some fifteen billion dollars for research and development. Through it all, the scientist has emerged from the laboratory to enter the highest councils of government. But, as John W. Finney writes in *Hiroshima Plus 20*, "inevitably, the increasing dependence upon federal support has had a corrupting influence upon the scientific community in diverting its attention from just the pursuit of scientific truth. Increasingly in recent years, the scientific community has become another vested and vocal interest in the body politic . . ."

Many thoughtful Americans have come to share Mr. Finney's disturbing view. A rush of books is emerging, analyzing the scientific enterprise, criticizing it, sometimes with affection and wonder, at times with hostility and puzzlement. William Gilman's *Science: U.S.A.*, a discursive survey of industrial, academic, and government science since the war, hurls rocks at the entire establishment.

Put simply, Mr. Gilman's is a wide-ranging book that ranges much too widely. It is replete with accusations and innuendoes with almost no substance or proof. "Isn't it disturbing," he writes, "that a congressional committee abandoned the idea of hiring scientific consultants — it could find no unbiased ones in that field." But we are left in the dark, wondering what committee, what circumstances. *Science: U.S.A.* does provide a sense of the breadth and scope of the contemporary scientific enterprise. But it flatly fails to illuminate the issues that concern so many Americans. "What path for science?" Mr. Gilman asks. "Will this elite keep its house clean? Will government have to control it completely? . . . Will the public rise against it . . .?" These are critical questions indeed. But *Science: U.S.A.* is of no help in finding the answers.